

**Applicant:** Giuseppe Dal Pra'  
**Application No.:** 10/041,569

**IN THE CLAIMS**

Please amend the claims as follows.

1. (Currently Amended) A ~~E~~combined gear change and brake control unit for a bicycle comprising;

a support body which can be fastened to a the handlebar of the bicycle,

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a brake control lever pivotally mounted on the support body around a first axis,

a gear change control unit carried by the support body, comprising a shaft turning around a second axis, ~~either orthogonal or substantially orthogonal positioned substantially orthogonally~~ to said first axis, in which the shaft carries a pulley on which an end portion is configured to receive a control cable of a derailleur which is to be wound, and in which said shaft is subject to a return torque tending to turn the shaft towards a direction in which the cable is released,

a gear change lever arranged behind the brake control lever for controlling the rotation of said shaft in a direction of increased winding of the cable, and

a button lever arranged on a side of said support body for controlling the rotation of said shaft in the release direction of the cable,

wherein the gear change control unit comprises a ratchet mechanism controlled by said button lever and subject to assuming a home position and an

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active position, the ratchet mechanism is arranged so to leave the shaft free to turn by a predetermined amount in the release direction of the cable, under the action of said return torque following each variation of position of the ratchet mechanism between the home position and the active position, and vice versa, and

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said button lever and said ratchet mechanism are two separate components,  
oscillating independently with respect to the support body, elastic means being  
provided to urge said button lever towards an end of stroke stop.

2. (Currently Amended) The Unit according to of claim 1, wherein said ratchet mechanism comprises a gear fastened to the support body with a first and a second meshing unit co-operating with said gear.

3. (Cancelled)

4. (Currently Amended) The Unit according to of claim 2, wherein the first and second meshing unit are arranged so to retain the gear in said release direction of the cable.

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5. (Cancelled)

6. (Cancelled)

7. (Withdrawn)

8. (Withdrawn)

9. (New) A combined gear change and brake control unit for a bicycle comprising:

a support body which can be fastened to a bicycle;

a brake control lever pivotally mounted on the support body around a first axis;

a gear change control unit carried by the support body, comprising a shaft turning around a second axis, positioned orthogonally to said first axis, in which the shaft carries a pulley on which an end portion of a control cable of a derailleur is destined to be wound, and in which said shaft is subject to a return torque tending to turn the shaft towards a direction in which the cable is released;

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a gear change lever arranged behind the brake control lever for controlling the rotation of said shaft in a direction of most winding of the cable; and

a button lever arranged on a side of said support body for controlling the rotation of said shaft in the release direction of the cable;

wherein the gear change control unit comprises a ratchet mechanism controlled by said button lever and subject to assuming a home position and an active position, the ratchet mechanism is arranged to leave the shaft free to turn by a predetermined amplitude in the release direction of the cable, under the action of said return torque following each variation of position of the ratchet mechanism between the home position and the active position, and vice versa, and

an elastic means urges the ratchet mechanism toward the home position.

10. (New) The unit of claim 9 wherein said ratchet mechanism comprises a gear fastened to the support body with a first and a second meshing unit cooperating with said gear.

11. (New) The unit of claim 10 wherein the first and second meshing unit are arranged to retain the gear in said release direction of the cable.

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12. (New) A combined gear change and brake control unit for a bicycle comprising:

a support body which can be fastened to a bicycle;

a brake control lever pivotally mounted on the support body around a first axis;

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a gear change control unit carried by the support body, comprising a shaft turning around a second axis positioned orthogonally to said first axis, in which the shaft carries a pulley on which an end portion of a control cable of a derailleur is destined to be wound, and in which said shaft is subject to a return torque tending to turn the shaft towards a direction in which the cable is released;

a gear change lever arranged behind the brake control lever for controlling the rotation of said shaft in a direction of most winding of the cable; and

a button lever arranged on a side of said support body for controlling the rotation of said shaft in the release direction of the cable;

wherein the gear change control unit comprises a ratchet mechanism controlled by said button lever and subject to assuming a home position and an active position, the ratchet mechanism is arranged to leave the shaft free to turn by a predetermined amplitude in the release direction of the cable, under the action of said return torque following each variation of position of the ratchet mechanism

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between the home position and the active position, and vice versa, said ratchet mechanism comprising a gear solidly fastened to the shaft and rocker arm pivoting on the support; and

said gear is equipped with radial teeth and in that said ratchet mechanism is pivotally mounted around an axis, either parallel or substantially parallel to the rotation axis of said shaft.

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13. (New) The unit of claim 11 wherein said ratchet mechanism comprises a gear fastened to the support body with a first and a second meshing unit cooperating with said gear.

14. (New) The unit of claim 13 wherein the first and second meshing unit are arranged to retain the gear in said release direction of the cable.

15. (New) A combined bicycle gear change and brake control unit comprising:

a support body which can be fastened to a bicycle;  
a brake control lever pivotally mounted on the support body around a first axis;

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a gear change control unit carried by the support body, comprising a shaft turning around a second axis that is positioned orthogonally to said first axis, the shaft attached to a pulley about which an end portion of a derailleuer control cable is destined to be wound, and the shaft is subject to a return torque that turns the shaft towards a first direction;

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a gear change lever for controlling the rotation of the shaft in the first direction;

a button lever arranged on a side of the support body for controlling the rotation of the shaft in a second direction;

a ratchet mechanism, controlled by said button lever, having a home position and an active position, the ratchet mechanism is arranged to leave the shaft free to turn by a predetermined amplitude in the second direction, under the action of said return torque following each variation of position of the ratchet mechanism between the home position and the active position, and vice versa; and

a means that pushes the ratchet mechanism toward the home position.

16. (New) The unit of claim 15 wherein the first direction is a direction that winds the cable onto the pulley and the second direction unwinds the cable from the pulley.

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17. (New) The unit of claim 15 wherein the first direction is a clockwise direction and the second direction is a counterclockwise direction.

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any*

18. (New) The unit of claim 15 wherein the first direction is a counterclockwise direction and the second direction is a clockwise direction.

19. (New) A combined gear change and brake control unit for a bicycle comprising:

a support body which can be fastened to a bicycle;

a brake control lever pivotally mounted on the support body around a first axis;

a gear change control unit carried by the support body, comprising a shaft turning around a second axis positioned substantially orthogonally to the first axis, in which the shaft carries a pulley on which an end portion is configured to receive a control cable of a derailleur which is to be wound, and in which the shaft is subject to a return torque tending to turn the shaft towards a direction in which the cable is released;

a gear change lever arranged behind the brake control lever for controlling

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the rotation of the shaft in a direction of increased winding of the cable; and  
a button lever arranged on a side of the support body for controlling the rotation of the shaft in the release direction of the cable;  
wherein the gear change control unit comprises a ratchet mechanism controlled by the button lever and subject to assuming a home position and an active position, the ratchet mechanism is arranged to leave the shaft free to turn by a predetermined amount in the release direction of the cable, under the action of the return torque following each variation of position of the ratchet mechanism between the home position and the active position, and vice versa.

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20. (New) The unit of claim 19 wherein said ratchet mechanism comprises a gear fastened to the shaft and a rocker arm pivoting on the support body cooperating with the teeth of said gear.

21. (New) The unit of claim 20 wherein the rocker arm comprises first and second meshing unit engaging the teeth of the gear.

22. (New) The unit of claim 20 wherein the button lever and the rocker arm are two separate components, oscillating independently with respect to the

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support body, elastic means being provided to push the button lever towards an end of stroke stop.

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23. (New) The unit of claim 21 wherein the first and the second meshing unit are arranged so to retain the gear in the release direction of the cable.

24. (New) The unit of claim 20 wherein the ratchet mechanism comprises elastic means arranged to push the rocker arm towards the home position.

25. (New) The unit of claim 20 wherein the gear is equipped with radial teeth and in that the rocker arm is pivotally mounted around an axis, either orthogonal or substantially parallel to the rotation axis of the shaft.

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